

**JOB DESCRIPTION**  
**MURFREESBORO WATER AND SEWER DEPARTMENT**  
**SENIOR WATER PLANT OPERATOR**

**1. JOB TITLE: SENIOR WATER PLANT OPERATOR**

- 2. DEFINITION:** The Senior Water Plant Operator performs skilled work in the operation of the Water Treatment Plant, including performing the duties of a Water Plant Operator, independently or under the direction of the Plant Superintendent or Assistant Superintendent. All employees are responsible to the Director and to the City Manager. The position is classified as Non-Exempt for purposes of the Fair Labor Standards Act, as having a possible occupational exposure to bloodborne pathogens, and as Safety Sensitive; the employee is subject to pre-employment, reasonable suspicion, post accident, random, promotion and transfer, return to duty and follow-up drug and alcohol testing. The employee is subject to a pre-employment, post-offer physical abilities test and examination with a written statement from the physician as to the employee's ability to meet the physical strength and dexterity requirements of the position.

**3. EQUIPMENT / JOB LOCATION:**

- a. This position requires the use of hand tools, laboratory equipment, calculators, personal computers and vehicles.
- b. The primary job location is the Water Treatment Plant. All city facilities and vehicles are smoke-free locations. The employee will be exposed to inclement weather, biological, chemical, electrical and mechanical hazards.

**4. ESSENTIAL FUNCTIONS OF THE JOB:**

- a. Checks various operational parameters in the plant; reports process and equipment status to a Master Plant Operator or Superintendent, makes adjustments based on independent judgment or as directed.
- b. Collects samples and runs basic laboratory analyses.
- c. Makes legible and correct entries in English in logs, charts and records both manually and by computer keyboard.
- d. Performs routine maintenance and assists with the repair of equipment.
- e. Calibrates and adjust chemical feeders.
- f. Performs reporting, record keeping and mathematical calculations, and communicates with management, coworkers and the public in English, orally, electronically and in writing.
- g. Detects and responds to odors and colors indicative of hazardous gases and laboratory test points.
- h. Senses by touch and responds mechanical problems as evidenced by vibration and/or temperature.
- i. Detects and responds to alarms and indicators of equipment malfunctions in normal aural range.
- j. Reads gauges, dials, equipment information plates, charts, and manuals, and makes

adjustments requiring depth perception.

- k. Uses hand tools, calculators, keyboards and laboratory equipment and manipulates machinery.
- l. Handles materials, which may require repetitive lifting of a 100 lb. bag.
- m. Using industrial water hoses and washes down equipment.
- n. Climbs and works off ladders while doing equipment maintenance.
- o. Climbs up and down stairs while carrying tools, samples and/or equipment weighing as much as 30 lbs.
- p. Manipulates tools, valves and chemical containers.
- q. Enters manholes and other confined spaces involving potential biological, chemical, electrical, and/or physical hazards.
- r. Performs tasks while wearing appropriate personal protective equipment, such as safety shoes, goggles, gloves, aprons, etc.
- s. Demonstrates a good work ethic, including a willingness to perform job place tasks and to assist coworkers without redundant directive.
- t. Establishes and maintains effective working relationships with supervisors, coworkers and the public.
- u. Exercises independent judgment within the limits of the position.
- v. Performs the duties and essential functions of a Water Plant Operator as assigned. Must be able to perform job duties and possess the physical abilities as described on the essential functions addendum for Water Plant Operator.

#### **5. ADDITIONAL EXAMPLES OF WORK TO BE PERFORMED:**

- a. Changes one-ton chlorine cylinders with assistance, and assists in the installation of a chlorine cylinder repair kit.
- b. Although not an essential function, the employee may perform tasks requiring the use of a respirator and/or self-contained breathing apparatus.
- c. Uses a tow motor to transport materials.
- d. Performs additional duties and special projects as assigned.

#### **6. REQUIRED KNOWLEDGE, SKILLS AND ABILITIES:**

- a. Must be at least 21 years of age.
- b. A diploma from an accredited high school or the equivalent GED is required.
- c. Must have legal authorization to work in the United States.
- d. Must submit to and pass a drug screen test upon offer of employment.
- e. Must have a driver's license valid in the State of Tennessee.
- f. Must have a valid Grade III or IV Plant Operator Certificate from the Tennessee Department of Environment and Conservation or its successor.
- g. Must be able to:
  - 1) Lift 50 lbs. to chest height.
  - 2) Raise and roll a standard manhole cover.
  - 3) Drag 100 ft. of one-inch water hose filled with water.
  - 4) Climb a ladder to a height of twenty feet.
  - 5) Climb approximately 70 vertical feet of stairs while carrying 30 lbs.

- 6) Detect audible alarms and indications of equipment malfunction.
- 7) Detect colors used to indicate equipment status and test endpoints.
- 8) Eyesight adequate to accurately read gauges and dials
- 9) Detect and respond to odors and colors indicative of hazardous conditions or of process conditions
- h. Must be able to operate various hand tools, including but not limited to wrenches, pliers, hammers, alignment and pry bars, jacks, etc.
- i. Must be able to comprehend both oral and written instructions, communicate in English, both orally and in writing, and perform tasks from written or oral instructions.
- j. Be knowledgeable of biological, chemical, electrical and mechanical hazards, asphyxiating, toxic and explosive gases and vapors, and emergency responses to these safety hazards.
- k. Demonstrate good workmanship, performing tasks neatly and in a timely manner.
- l. Be able to identify all alarms, and actions to take should an alarm sound.
- m. Be able to identify, locate and operate all safety equipment related to that job.
- n. Be able to monitor instrumentation and make operational adjustments to unit processes to maintain process efficiency and to maintain operations within predetermined limits.
- o. Be knowledgeable of all water quality limits, and actions to take should the limits be approached or exceeded.
- p. Be able to restart the plant after an electrical outage, and to operate all unit processes in the treatment plant.
- q. Be able to properly handle full and empty chemical containers, including changing ton cylinders with assistance, and to assist in the installation of a chlorine cylinder repair kit.
- r. Be able to collect samples as necessary for plant operation, following proper protocol for sample collection, transport and chain of custody, and to perform all analyses required for operational control.
- s. Demonstrate good habits of personal and workplace cleanliness.
- t. Demonstrate management and supervisory skills.
- u. Must be able to report on time for work and perform the duties of the position for an entire shift for the entire workweek and to perform occasional overtime. May be required to work evening, night, weekend and/or holiday shifts.
- v. Must be able to work in confined spaces.
- w. Must be able to adjust the filtration rates to maintain proper elevated storage tank levels. This task includes making corresponding changes in pumping and chemical feed rates.
- x. Good human relations skills with the ability to establish effective working relationships with supervisors, co-workers and the public.
- y. Must be able to pass physical examination and abilities test/post offer screen for employment.

Non-Exempt  
Safety Sensitive  
December 30, 2004

**ESSENTIAL FUNCTIONS ADDENDUM  
MURFREESBORO WATER AND SEWER DEPARTMENT  
SENIOR WATER PLANT OPERATOR**

Employees in this position work variable hours. They will be required to work 40 hours. The Senior Plant Operator is under the supervision of a Plant Superintendent or Assistant Superintendent. Employees in this position assist in routine maintenance and overall functioning of the machinery and equipment in the plant. This position requires the following activities including but not limited to, bending, stooping, squatting, kneeling, lifting, pushing, pulling, carrying and ambulating on various terrains. The Senior Plant Operator is also exposed to loud noises, mechanized, equipment, dirt, dust, rain, sleet, snow, rough terrain, chemicals, low or no light conditions. The Senior Plant Operator is also responsible for operating vehicles, light equipment and various tools.

Physical Demands

Rarely - suggests the employee is required to perform tasks less than 8 repetitions per hour, or less than 33% of the workday.

Occasional - suggests the employee is required to perform tasks 8-15 repetitions per hour, or 33% of the workday.

Frequent - suggests the employee is required to perform tasks 16-32 repetitions per hour, or 66% of the workday.

Constantly - suggests the employee is required to perform tasks 33 or more repetitions per hour, or greater than 66% of the workday.

<u>Lifting</u>	<u>Rarely</u>	<u>Occasional</u>	<u>Frequent</u>	<u>Constant</u>
<20#			X	
20-50#		X		
50-75#	X			

<u>Push/Pull</u>	<u>Rarely</u>	<u>Occasional</u>	<u>Frequent</u>	<u>Constant</u>
<20#			X	
<20-50#		X		
50-75#	X			
75-100#	X			
>100#	X			

Depending on the job duties for the day, the Plant Operator may have to perform lifting, pushing or pulling on a more or less frequent basis. However, job duties may change throughout the week depending on the needs of the Water Department.

Bending/Squatting/Twisting - Is required frequently through the day depending on the workload. A combination of all 3 components may be needed to maintain and construct overhead and underground electric distributions in awkward positions.

Pushing/Pulling - Is required occasionally through the day when loading fluoride off carts or moving potassium / polymer. Also required to pull water hose.

Lifting/Carrying - Is required occasionally for lifting/carrying fluoride or sand bags. Employees lift and carry hand tools, shovels, water hoses, manhole covers and basic laboratory equipment.

The following items were weighed and can be lifted, carried, pushed, or manipulated in a fashion using all 4 components:

<u>Item</u>	<u>Weight</u>
Bag of Fluoride	50#
Bag of Sand	100#
Valve Wrench	33#
6" hose (empty)	71#
Buckets of Lubricant	42#

Employees are able to get help with lifting heavy objects and are encouraged to if an object weights over 100#'s.

Standing/Walking - Is required constantly throughout the day depending on the workload.

Reaching - Is required occasionally throughout the day depending on the workload.

Manual Dexterity/Gripping/Fine Motor - Performed occasionally throughout the day, especially with the use of hand tools and in laboratory. Also required to perform data entry via computers.

Climbing - Required frequently throughout the day when draining tanks (ladder) and when using stairs to move from one area of worksite to another.

Overhead activity - Required occasionally during the day depending on the workload.

Driving - Required rarely throughout the day when using tow motor.

Kneeling - Can be required rarely throughout the day depending on the workload.

Squatting - Can be required occasionally throughout the day depending on the workload.

Sitting - Can be required occasionally throughout the day.

Tools handled:

Wrenches

Pliers

Hammers

Screwdrivers

Shovels

Electric Drill

Broom / Mop

Water hose

Extension cords

Wheelbarrow

Work Conditions

*Exposed to:*

Hot temperatures

Cold temperatures

Loud noises

Slippery surfaces

Dust

Dirt

Rough terrain

Chemicals

Low or no light conditions

Raw water

Confined spaces

Moving machinery

Physical Ability Needed to perform the Following Positions:

Walking

Squatting

Bending/Crouching

Stooping

Hand gripping

Twisting

Hand-eye coordination

Pushing/Pulling

Lifting/Carrying  
Reaching  
Overhead activity  
Climbing  
Driving  
Kneeling  
Ambulate on uneven terrain

Addendum  
December 30, 2004